

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-315805

(43)Date of publication of application : 14.11.2000

(51)Int.Cl. H01L 29/84  
G01L 9/06  
// H01L 21/205

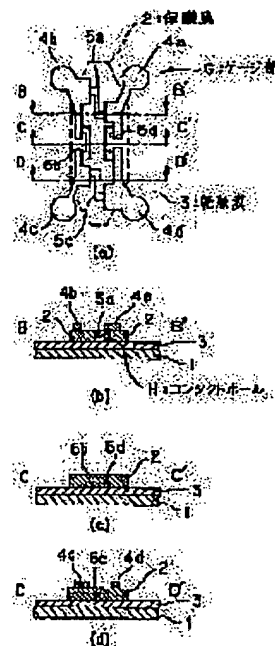
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## (54) STRAIN DETECTING ELEMENT AND MANUFACTURE OF THE SAME

## (57)Abstract:

PROBLEM TO BE SOLVED: To provide a strain detecting element for detecting each kind of physical quantity by detecting strains at high sensitivity even at a high temperature, and a method for manufacturing the strain detecting element.

SOLUTION: This strain detecting element is provided with a metallic diaphragm as a strain developing part, an insulating film 3 laminated on a metallic diaphragm, and strain gauges 5a and 5d laminated on the insulating film 3 and formed of a crystallized silicon carbide film. Then, the strain is detected by the piezo resistance effect of the strain gauges 5a and 5d. Also, at the formation of the crystallized silicon carbide film on the insulating film 3, the silicon carbide film in an amorphous state is formed by a plasma CVD method at a temperature which is lower than the crystallizing temperature for not impairing elasticity as the strain developing part of the metallic diaphragm, and this is annealed by using an excimer laser so as to be crystallized.



## LEGAL STATUS

[Date of request for examination] 25.04.2001

[Date of sending the examiner's decision of] 02.09.2003

rejection]

[Kind of final disposal of application other  
than the examiner's decision of rejection or  
application converted registration]

[Date of final disposal for application]

[Patent number] 3546151

[Date of registration] 16.04.2004

[Number of appeal against examiner's  
decision of rejection] 2003-19194

[Date of requesting appeal against  
examiner's decision of rejection] 02.10.2003

[Date of extinction of right]

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